Natural Heritage & Endangered Species Program

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Division of Fisheries & Wildlife
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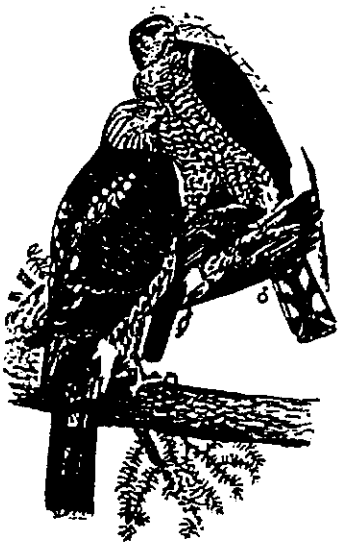
MASSACHUSETTS SPECIES OF SPECIAL CONCERN

Sharp-shinned Hawk
(Accipiter striatus)

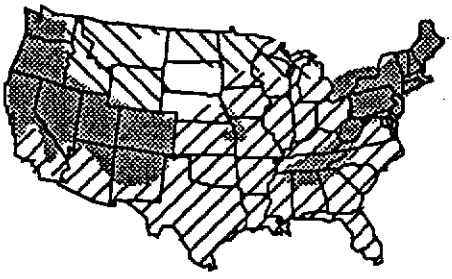


The National Geographic Society. Field Guide to the Birds of North America. Washington, D.C.: The National Geographic Society, 1987.

ETYMOLOGY: "Sharp-shinned" refers to the raised ridge on the inside front of the tarsus (not actually a "shin"). Accipiter is Latin for "bird of prey" probably derived from accipere, "to take" or from the Greek aci, "swift" and pteron, "wing." Striatus is Latin for "striped," referring to the underparts of the immature bird.

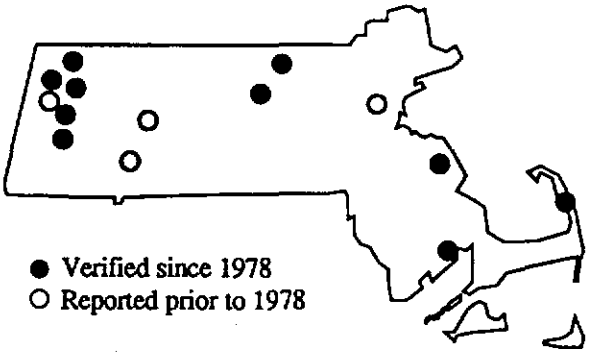
DESCRIPTION: The Sharp-shinned Hawk, which is slightly larger than a blue jay, is the smallest member of the Accipiter Family, measuring 25-36 cm (10-14 in) in length. It has a slim body; short, broad wings rounded at the tips, ranging from 51-69 cm (20-27 in) when extended; and a long, narrow, and usually notched or square-tipped tail. The adult plumage is dark slate-grey above with white underparts finely barred with red-brown. Its head is slate-grey down to the eye-line; white thinly streaked with brown below the eyeline; and red-brown cheeks. The tail has three or four bands of dark and light brown of equal width both above and below; white undertail coverts; and a narrow greyish-white tip (terminal band). The eyes of the adult Sharp-shinned Hawk are red and its long stick-like legs are a bright yellow. The sexes have similar plumage but the females are less bluish above, lighter below, and are noticeably larger that the males. The juveniles and immature adults have brown upperparts splotched with white. Underparts are white splotched with brown.

The Sharp-shinned, or "Sharpie," has a distinctive flight pattern characterized by a series of steady rapid wingbeats followed by a short interval of gliding (e.g., Flap, Flap, Flap...Sail), and intermittent soaring, usually in small circles. It is buoyant in flight; uses its tail as a rudder to maneuver; and is capable of great bursts of speed to capture its prey.



Summer (breeding range)
Winter range
Year-round range

Range of the Sharp-shinned Hawk



● Verified since 1978
○ Reported prior to 1978

Breeding Distribution in Massachusetts

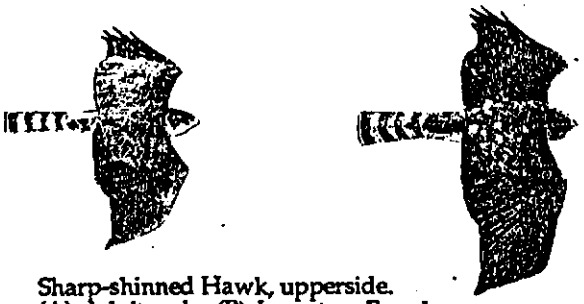
The call of the Sharp-shinned Hawk is a series of very rapid cackles, given when the bird is alarmed. The common note sounds like a "kek, kek, kek" with a slight nasal quality, the male's voice being much weaker than the female's.

POPULATION STATUS: The Sharp-shinned Hawk is listed as a Species of Special Concern by the Massachusetts Division of Wildlife and Fisheries. In the 19th and 20th centuries, Sharp-shinned Hawks were slaughtered in tremendous numbers by people who erroneously believed that this hawk affected songbird populations. When legal measures were implemented in the early 1900's to protect the Sharp-shinned Hawk, populations increased noticeably. However, when DDT and its associated pesticides were introduced into the environment in the 1950's, the Sharp-shinned faced a serious threat to its well-being. As the pesticides accumulated in the Sharp-shinneds' prey and were magnified through the food chain, reproductive failure of predatory birds like the Sharp-shinned resulted. Eggs were destroyed as the shells became too thin to withstand incubation. By the late 1970's, Sharp-shinned Hawks appeared to have made a significant comeback from the nationwide decline of the early 1970's.

However, records show that since 1985, the Sharp-shinned Hawk population is once again experiencing serious decline in its Northeastern breeding range of Quebec, the Canadian maritime provinces, New England, and to a lesser extent, Eastern Ontario (Kerlinger, 1991). Studies done during the past two years show that the decline is spreading inland, occurring in Central Canada as well. It is believed that this decline may be attributed to reproductive failure as a result of acid rain and the control of the spruce budworm with the spraying of Fenitrothion. DDT and environmental contaminants have been detected in some birds, possibly as a result of eating pesticide-laden migrant birds returning from South America, but this does not explain why only eastern populations and not midwestern population are effected. In examining the changes in the forests of the Canadian maritime provinces and New England during the past 20 to 50 years, it was noted that the two most evident changes are increased acid rain and the control of spruce budworm (Kerlinger,1991). These forest areas are the breeding grounds for the Sharp-shinned Hawk as well as declining neotropical and non-tropical songbird migrants.

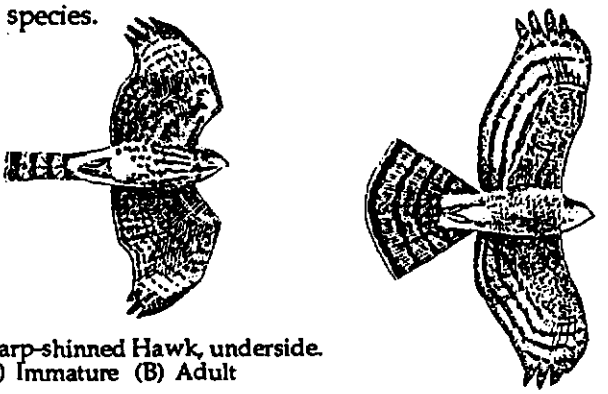
Another theory regarding the rarity of the Sharp-shinned Hawk in Massachusetts may be due to the lack of appropriate coniferous forests required to support a large population. The red spruce (Picea rubens) habitat that this bird prefers is limited to the north central and western regions of the state. Since 1978, only six confirmed and four suspected breeding pairs have been reported in Massachusetts. The secretive and retiring nature of this hawk makes it very difficult to locate, and current population data may not accurately reflect the actual number breeding in the state.

MANAGEMENT RECOMMENDATIONS: Management recommendations for the Sharp-shinned Hawk are difficult and complex. Continued monitoring of population abundance and population changes throughout its entire range is critical, as is the monitoring of reproductive performance and the factors affecting this performance. Since accipiters depend on forest for breeding habitat, studies into the regional, large scale land-use impacts on populations are also of great importance in the management of this species (Mosher,1981). Recommendations would be to investigate such complex areas as: effects of forest maturation on species abundance; ways that forest management and agricultural practices impact populations; the age and species composition trends in eastern forests and the impact of these trends on raptors; and the mechanisms that control the year-to-year fluctuations in reproduction; and to continue research in breeding and habitat studies and migration (Mosher, 1981). Until these various studies are explored further, it is difficult to establish a course of action. Most important at this time is that there is recognition of the frightening decline of a once-common species.



Sharp-shinned Hawk, upperside.
(A) Adult male (B) Immature Female

Dunne, Pete; Sibley, David; and Sutton, Clay. Hawks in Flight. Boston: Houghton Mifflin Company, 1988.



Sharp-shinned Hawk, underside.
(A) Immature (B) Adult

Dunne, Pete; Sibley, David; and Sutton, Clay. Hawks in Flight. Boston: Houghton Mifflin Company, 1988.

Partially funded by a grant from DEM Forest Stewardship Program

SIMILAR SPECIES IN MASSACHUSETTS: The Sharp-shinned Hawk is almost identical in plumage to the Cooper's Hawk (Accipiter cooperii). The Sharp-shinned can be distinguished from the Cooper's Hawk by its smaller size, though the female Sharp-shinned is often equal in size to the male Cooper's Hawk; its buoyant flight; and by its square or slightly notched tail with a narrow greyish-white terminal band at the tip. The Cooper's Hawk has a rounded tail with a wide bright white terminal band at the tip; a large head; slower wingbeats appearing almost arthritic; and it generally soars more.

RANGE: The breeding range of the Sharp-shinned Hawk extends from Newfoundland west through Canada to northwestern Alaska. Less commonly, this species also breeds south to northern Florida, and west to west central California. Wintering quarters range from the southern United States to Panama and the Bahamas. Some northerly breeding populations winter north to central Michigan and Nova Scotia.

HABITAT IN MASSACHUSETTS: The Sharp-shinned Hawk prefers extensive mixed woodlands and coniferous forests containing spruce. In Massachusetts, the Sharp-shinned has been found among red spruce (Picea rubens) with periodic occurrences of white birch (Betula papyrifera). Breeding habitat is usually near open areas and in the vicinity of water.

LIFECYCLE/BEHAVIOR: In Massachusetts, juvenile Sharp-shinned Hawks begin migrating south by late September with the adult birds following in October or early November. The spring flight to and through New England to their northern breeding grounds usually occurs in early April. Sharp-shinneds migrate by day. They hunt early in the day, travel during the warmer hours of rising air currents (thermals) and hunt again toward evening. Adult Sharp-shinneds tend to migrate inland while juveniles tend to follow the coast. They frequently travel in pairs or in groups of three, four, five, or more birds.

Courtship rituals take place over and between the branches of the trees as well as at significant heights above the canopy. Nesting pairs are solitary. The nests are relatively large (up to 2 ft. in diameter) considering the size of this species and are generally well concealed and difficult to find. Nests are placed in the denser portion of the lower canopy at heights of 10 to 60 ft. against the trunk or in a notch of the tree. Preferred nesting sites are in coniferous woods and in groves containing white pine, pitch pine, spruce, hemlock, and white cedar, but deciduous trees, such as oaks, elms, birches and basswood are sometimes chosen. Nests are broad platforms built from sticks and twigs and sometimes strips of bark; moss, grass or leaves are rarely used. Both sexes gather nesting material, but the female does most or all of the building. Usually, a new nest is built yearly. Sharp-shinneds are not committed to a specific nesting territory from year to year. possibly as a result of their relatively short life expectancy (approx. 5 yrs.), the shifting abundance and scarcity of food, and competition with earlier nesting raptors, such as the Cooper's Hawk, for nesting sites.

The eggs, numbering 4-5 per clutch, are bluish-white or greenish-white speckled with browns and lavender forming wreaths at either end. Incubation takes 35 days, with the young fledging 21 to 35 days later; usually with the males leaving first. Nestlings are fed by both parents, consuming up to 3 small birds per day per nestling. The rearing of young coincides with an abundance of nestling small birds and young of small mammals that can be readily captured. The Sharpie nests later than the Cooper's Hawk and much later than the Goshawk, therefore lessening the competition for food. If the food supply is depleted, nestlings are fed such items as locust, cicadas, and large beetles. Nestlings are fed by both parents; usually one guards the nest while the other searches for food. Young continue their dependence on the adults up to six weeks after hatching. Families break up at the start of the fall migration.

Sharp-shinned Hawks hunt by perching inconspicuously on a branch and darting after their prey; gliding close to the ground; or, by making low sallies from perch to perch on the chance that something will be flushed. The Sharpie's short broad wings and long narrow tail are well adapted for maneuverability when hunting in forested areas. It feeds primarily on small birds but occasionally preys on mice, shrews, bats, frogs, and large insects when birds are scarce. Females, due to their larger size, may take doves and quail. Mature birds require about 4 or 5 small birds per day. Fledged juveniles feed mostly on bird nestlings but have been observed trying unsuccessfully to prey on larger birds (such as pheasants) while still in the learning stages of hunting. When feeding, the Sharp-shinned Hawk devours the entire carcass, bones and all. As with all accipiters, the prey is squeezed, and the needle-sharp talons can penetrate and cause fatal damage. Its prey dies as a result of shock, suffocation, or penetration and is typically plucked before being eaten, usually at a favorite "plucking post."

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(Accipiter striatus)

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